The Politics of PVC: The co-evolution of technology and institutions in upland communities in Northern Thailand

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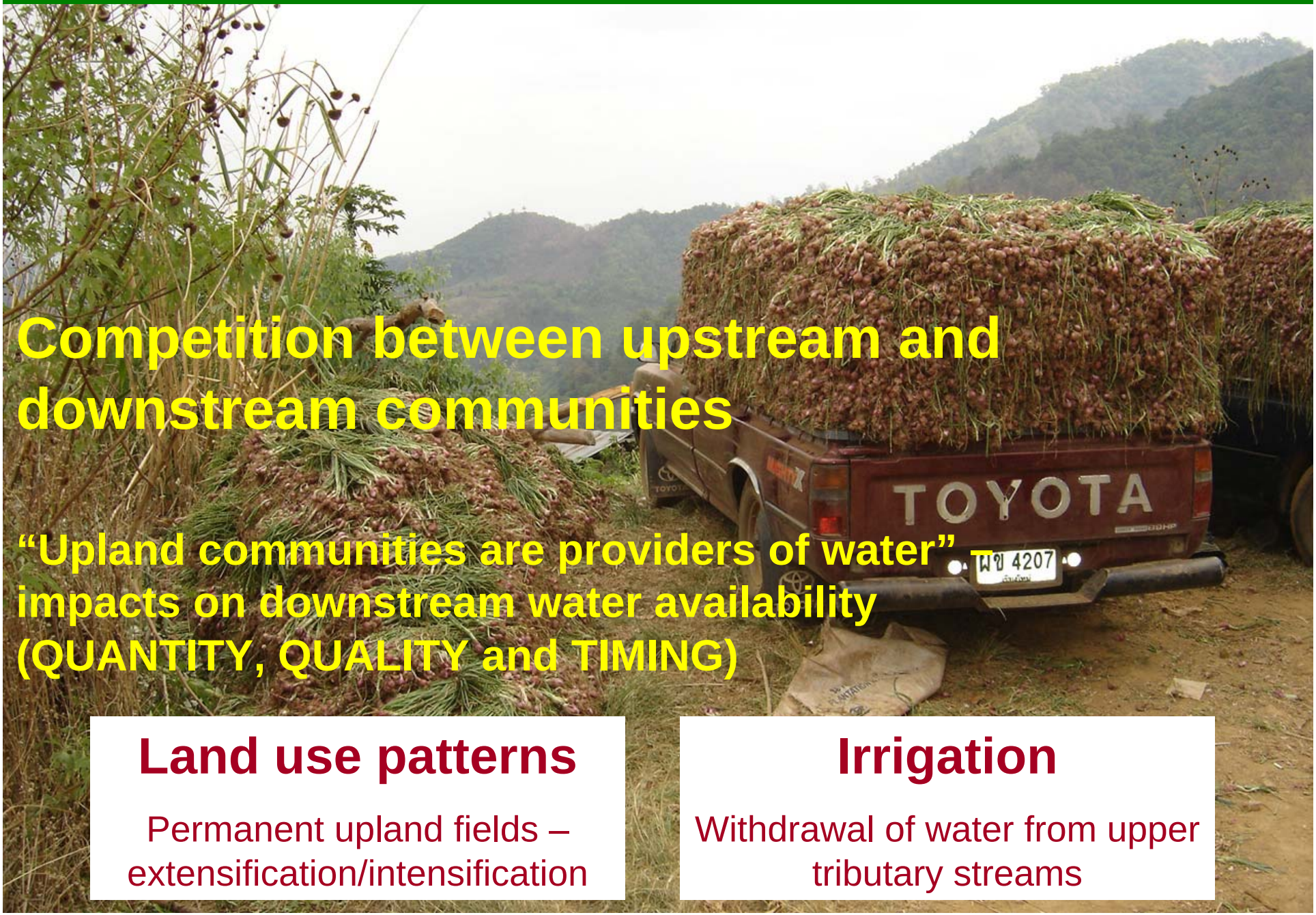
Watershed Conflict



Competition between upstream and downstream communities

"Upland communities are providers of water" – impacts on downstream water availability (QUANTITY, QUALITY and TIMING)

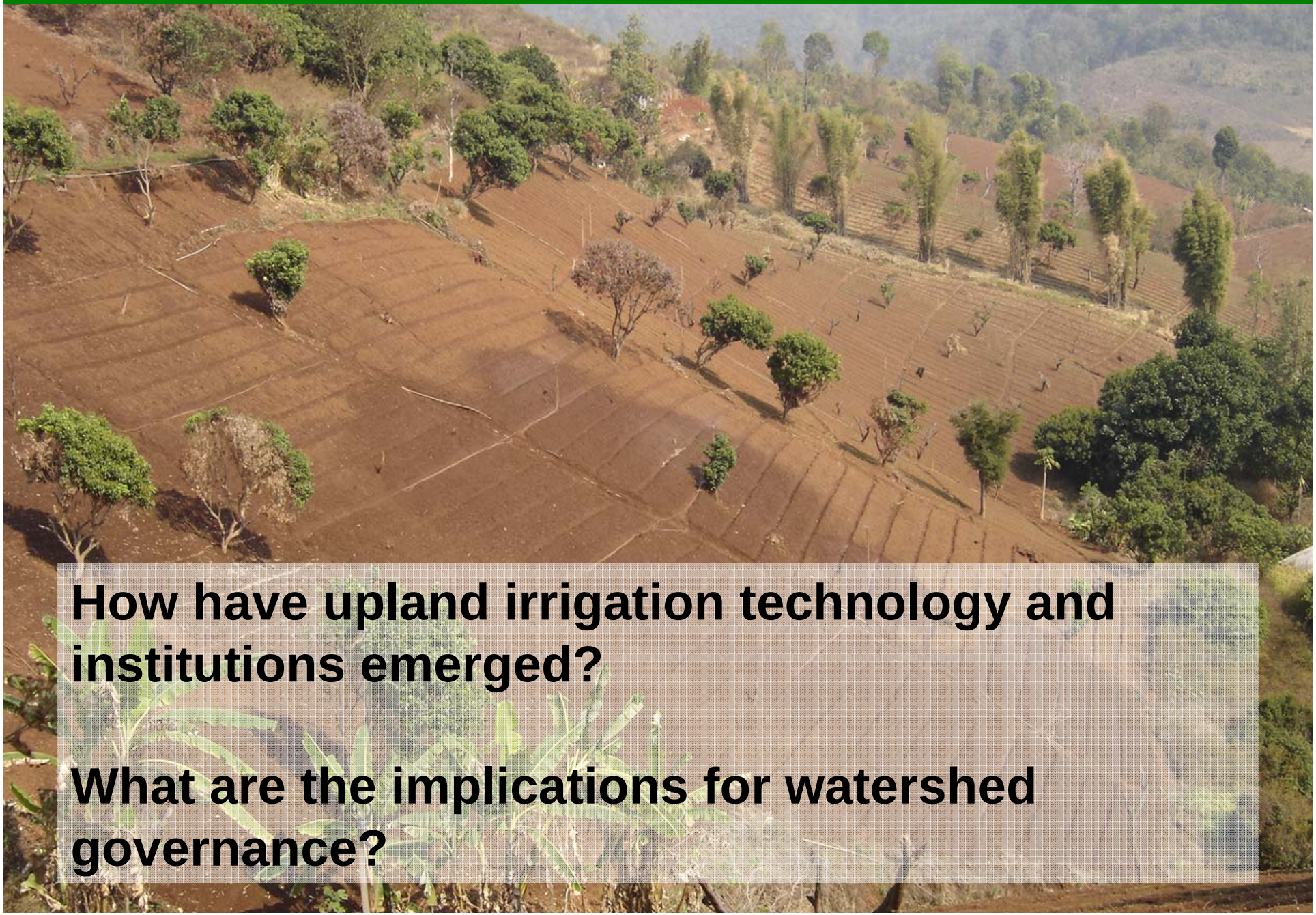
Land use patterns

Permanent upland fields – extensification/intensification

Irrigation

Withdrawal of water from upper tributary streams

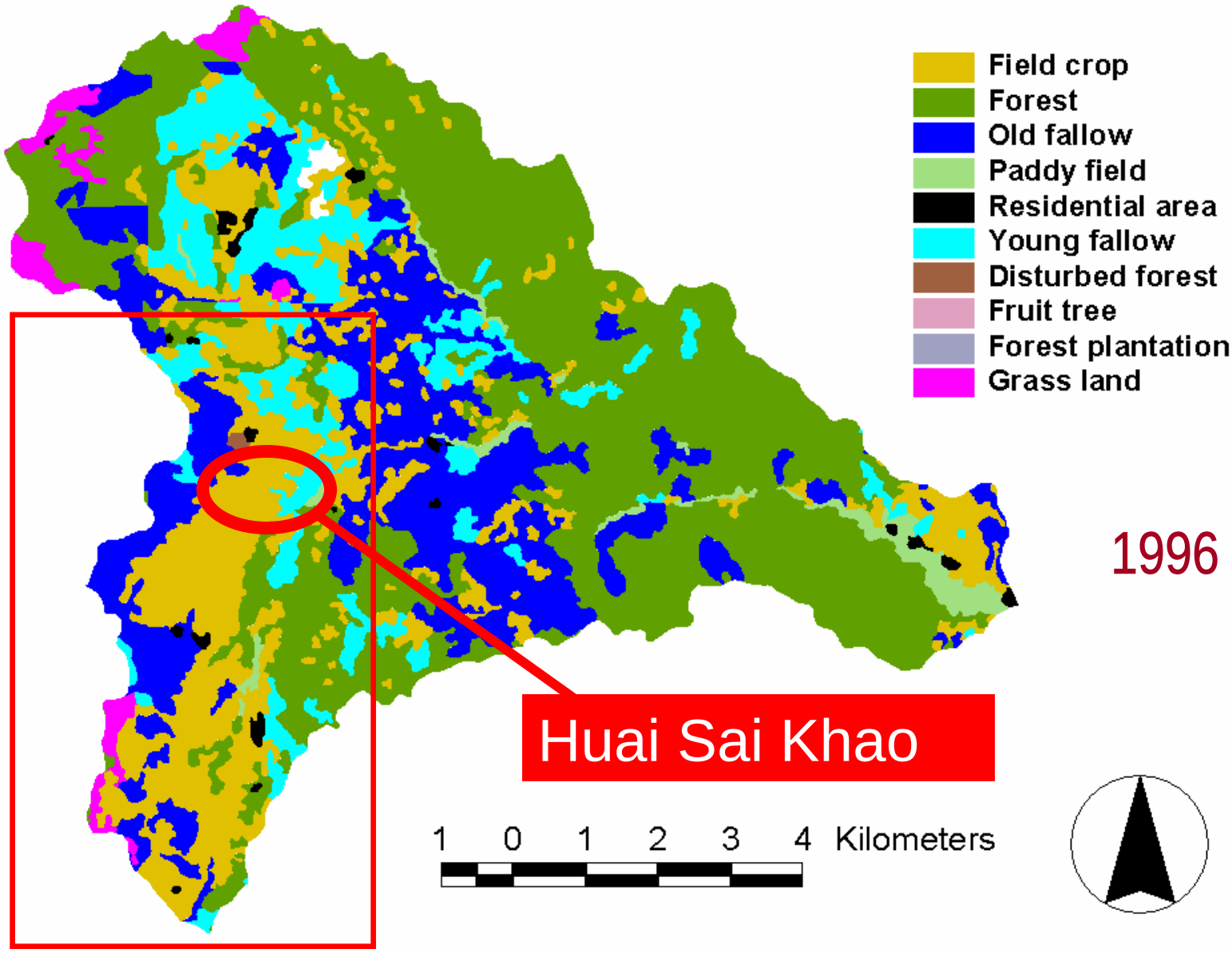
Understanding ‘Upstream’



How have upland irrigation technology and institutions emerged?

What are the implications for watershed governance?

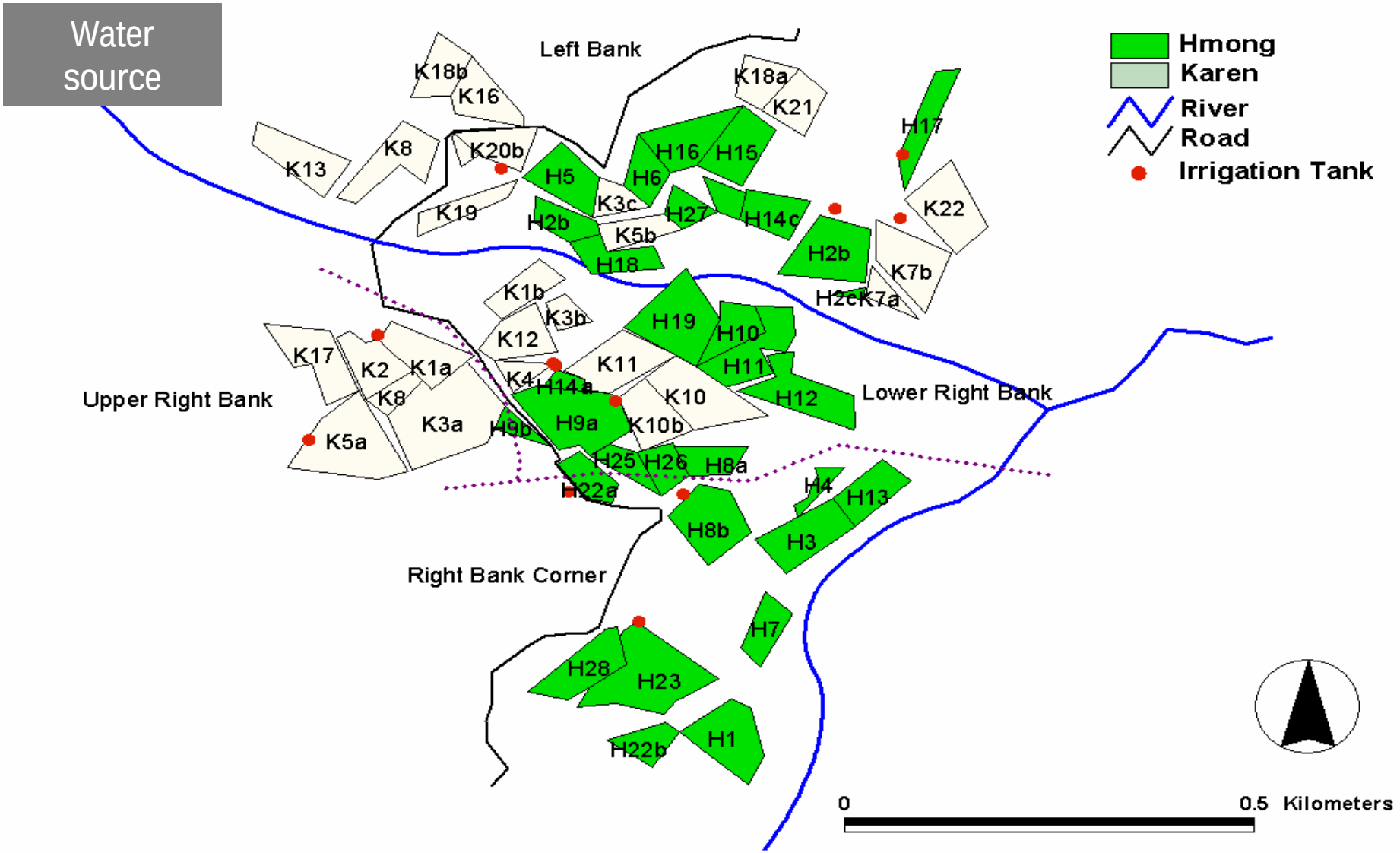
Land Use Change in Mae Suk Watershed ’76-’96



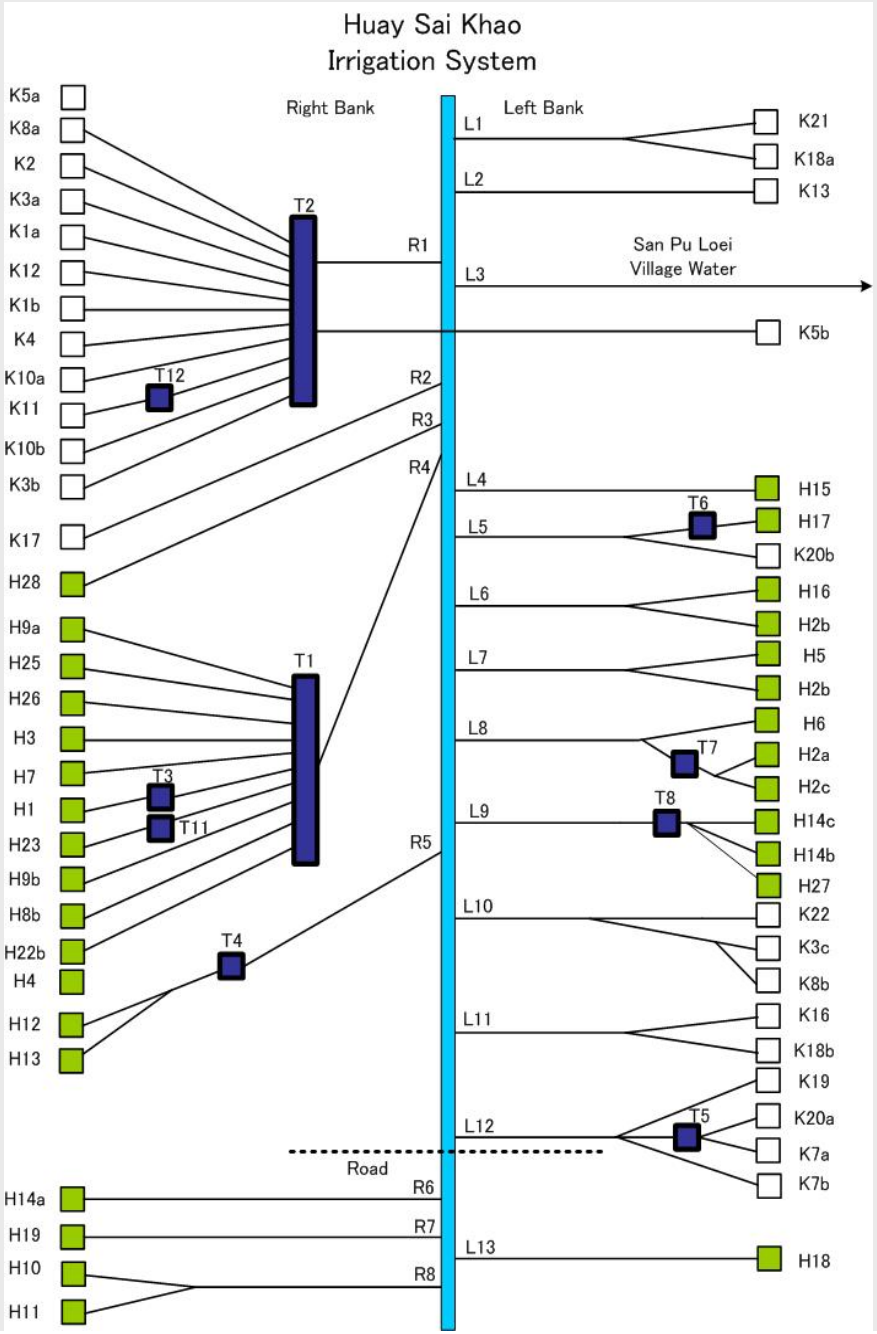
Upland Irrigation

Upland Irrigation

Huai Sai Khao Shallot Plots



Process of adaptive governance



Kinship networks provide basic foundation for development of pipes

Informal norms regulating insertion of new pipes fail

Social and financial capital mobilized to enhance storage capacity

New water allocation rules and management norms develop within user groups

Process of adaptive governance

Competition between individual and groups intensifies

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New institution created at stream level

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Capacity of new institution challenged

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Stream-level competition intensifies, new institution fails

Arrangements between Hmong and Karen do not emerge

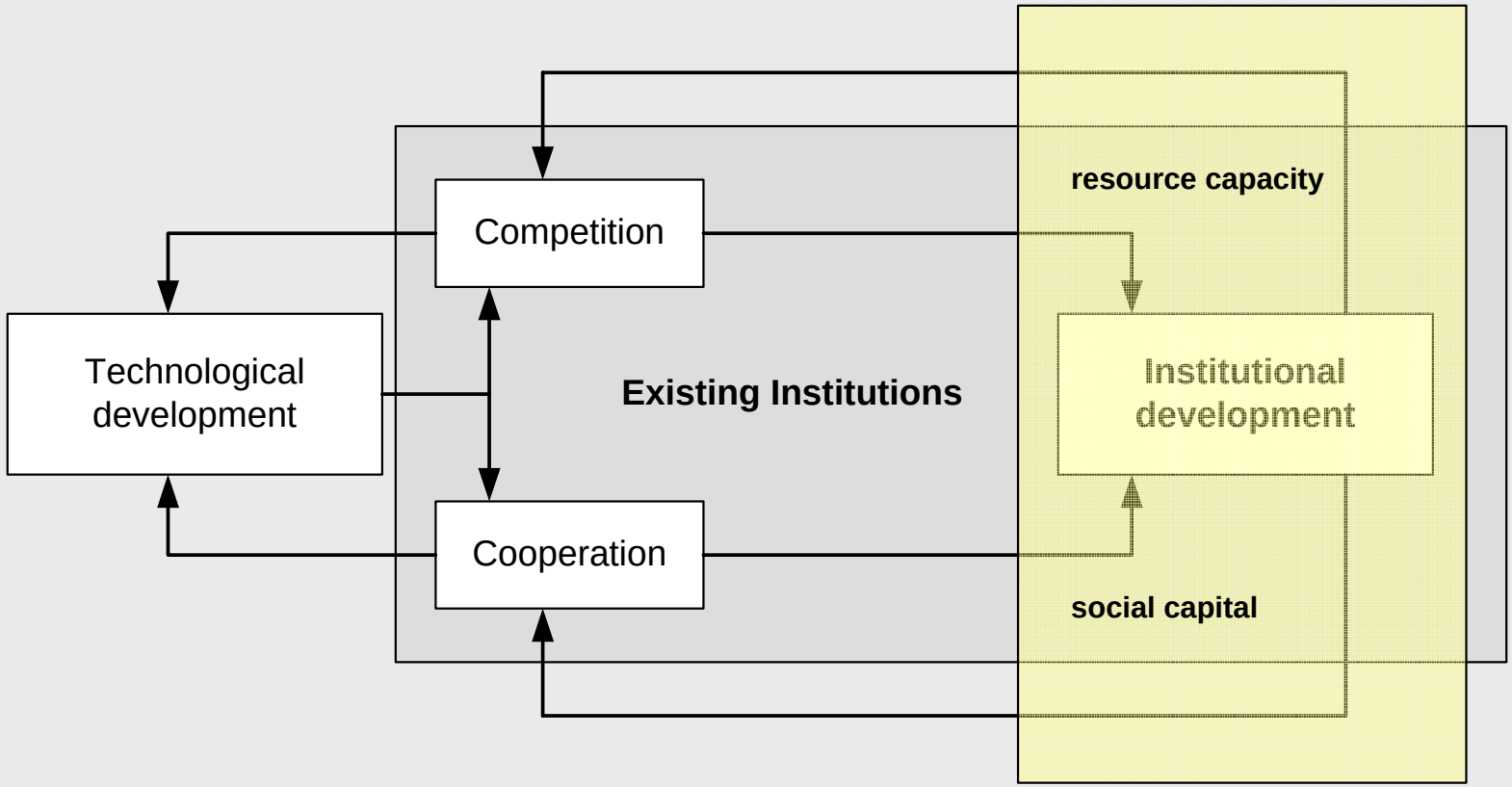
Farmers state need for ‘higher authority’

Farmers and local leaders refuse to engage with village administration

Proposals made to sub-district to increase storage capacity

WHAT NEXT….?

Scaling up through cycles of adaptation



Continuous adaptations to balance competition and cooperation as technology and institutions get more complex

Linkages within the governance landscape?

No official linkages with government agencies, but how to deal with increasingly inter-village nature of small-scale systems?

Developments in resource governance

Sub-district: Decentralization bringing new mandate and new resources, but avoids mediation

Watershed: Networks providing new forum for negotiation of land use among stakeholders and with government, but lowland bias and power dominate

River Basin: Official institutional framework for negotiation and planning, but high diversity makes participatory planning difficult

Addressing conflict

Upstream farmers have established themselves as water users and managers, but there is no one ‘upstream’ community

Technology and institutions develop in parallel through local processes of adaptive governance

Recognition of rights to manage water is important, but confidence building and rules are the first priority – building on local institutional innovations

Sub-district government to assume larger role in politics of natural resources, not just budget

Need to support capacity of villages to negotiate

Need for dialogues based on water use data – local and watershed